What is claimed is:

1.   A method of improving data transfer in a virtual network, comprising steps of:

      allocating one or more outbound packing buffers for each of a plurality of particular

network addresses;

      packing outbound data packets into appropriate ones of the outbound packing buffers,

according to a network address within a header of each outbound data packet; and

      transmitting each outbound packing buffer onto the virtual network in a single

transmission operation.

2.   The method according to Claim 1, wherein each of the particular network addresses is a

next-hop address on the virtual network.

3.   The method according to Claim 1, wherein the network address within the header is a

next-hop address inserted into the header by a sending host.

4.   The method according to Claim 1, wherein the virtual network is defined by a plurality of

logical partitions within a single computing device.

5.   A method of improving data transfer in a virtual network, comprising steps of:

      allocating one or more outbound packing buffers for each of a plurality of first network

addresses, wherein each outbound packing buffer is logically divided into a plurality of frames, the

frames being associated with second network addresses;

5   packing outbound data packets into selected frames of selected ones of the outbound

6   packing buffers, when a header of the outbound data packet to be packed specifies the first

7   network address and the second network address which correspond to the selected outbound

8   packing buffer and the selected frame; and

9   transmitting each outbound packing buffer onto the virtual network in a single

10   transmission operation.

1   6.   The method according to Claim 5, wherein the first network address comprises a next-hop

2   address on the virtual network and the second network address comprises a final destination

3   address.

1   7.   The method according to Claim 5, further comprising the steps of:

2   receiving a set of frames from the transmitting step; and

3   determining whether to forward the outbound data packets which are packed in each

4   frame by inspecting a first packet of the frame.

1   8.   A system for improving data transfer in a virtual network, comprising:

2   means for allocating one or more outbound packing buffers for each of a plurality of

3   particular network addresses;

4   means for packing outbound data packets into appropriate ones of the outbound packing

5   buffers, according to a network address within a header of each outbound data packet; and

6   means for transmitting each outbound packing buffer onto the virtual network in a single

7   transmission operation.

1   9.   The system according to Claim 8, wherein each of the particular network addresses is a

2   next-hop address on the virtual network and the network address within the header is a next-hop

3   address inserted into the header by a sending host.

1   10.   The system according to Claim 8, wherein the virtual network is defined by a plurality of

2   logical partitions within a single computing device.

1   11.   A system for improving data transfer in a virtual network, comprising:

2   means for allocating one or more outbound packing buffers for each of a plurality of first

3   network addresses, wherein each outbound packing buffer is logically divided into a plurality of

4   frames, the frames being associated with second network addresses;

5   means for packing outbound data packets into selected frames of selected ones of the

6   outbound packing buffers, when a header of the outbound data packet to be packed specifies the

7   first network address and the second network address which correspond to the selected outbound

8   packing buffer and the selected frame; and

9   means for transmitting each outbound packing buffer onto the virtual network in a single

10   transmission operation.

1   12.   The system according to Claim 11, wherein the first network address comprises a next-

2   hop address on the virtual network and the second network address comprises a final destination

3   address.

1   13.   The system according to Claim 11, further comprising:

2   means for receiving a set of frames from the transmission; and

3   means for determining whether to forward the outbound data packets which are packed in

4   each frame by inspecting a first packet of the frame.

1   14.   A computer program product for improving data transfer in a virtual network, the

2   computer program product embodied on one or more computer readable media and comprising:

3   computer readable program code means for allocating one or more outbound packing

4   buffers for each of a plurality of particular network addresses;

5   computer readable program code means for packing outbound data packets into

6   appropriate ones of the outbound packing buffers, according to a network address within a header

7   of each outbound data packet; and

8   computer readable program code means for transmitting each outbound packing buffer

9   onto the virtual network in a single transmission operation.

1   15.   The computer program product according to Claim 14, wherein each of the particular

2   network addresses is a next-hop address on the virtual network and the network address within

3   the header is a next-hop address inserted into the header by a sending host.

1   16.   The computer program product according to Claim 14, wherein the virtual network is

2   defined by a plurality of logical partitions within a single computing device.

1   17.   A computer program product for improving data transfer in a virtual network, the

2   computer program product embodied on one or more computer readable media and comprising:

3   computer readable program code means for allocating one or more outbound packing

4   buffers for each of a plurality of first network addresses, wherein each outbound packing buffer is

5   logically divided into a plurality of frames, the frames being associated with second network

6   addresses;

7   computer readable program code means for packing outbound data packets into selected

8   frames of selected ones of the outbound packing buffers, when a header of the outbound data

9   packet to be packed specifies the first network address and the second network address which

10   correspond to the selected outbound packing buffer and the selected frame; and

11   computer readable program code means for transmitting each outbound packing buffer

12   onto the virtual network in a single transmission operation.

1   18.   The computer program product according to Claim 17, wherein the first network address

2   comprises a next-hop address on the virtual network and the second network address comprises a

3   final destination address.

1   19.   The computer program product according to Claim 17, further comprising:

2   computer readable program code means for receiving a set of frames from the

3   transmission; and

4   computer readable program code means for determining whether to forward the outbound

5   data packets which are packed in each frame by inspecting a first packet of the frame.